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Fire Island Feasibility Study: Summary Report — Final Report

UAA School of Justice & UAA School of Engineering

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Summary

This document summarizes the findings the Fire Island Prison Feasibility Study, undertaken to assess the feasibility of locating a correctional facility on Fire Island in the Municipality of Anchorage. The three reports summarized here covered the three major phases of the study: (1) an assessment of future bed space needs of the Alaska Department of Corrections; (2) an evaluation of the physical site and cost estimates for prison construction and operation; and (3) a public opinion survey and open discussion.

Additional information

This report is part of the Fire Island Prison Feasibility Study, a project conducted jointly by the School of Justice and School of Engineering at University of Alaska, Anchorage under contract to the Alaska Department of Corrections. The project undertook to assess the feasibility of locating a correctional facility on a 4,240 acre tract of land on Fire Island, which lies in Upper Cook Inlet about three miles off Point Campbell within the Municipality of Anchorage. The project was divided into three major phases: (1) an assessment of future bed space needs of the Alaska Department of Corrections; (2) an evaluation of the physical site and cost estimates for prison construction and operation; and (3) a public opinion survey and open discussion.

The project's three major reports include:

- *Alaska Correctional Requirements: A Forecast of Prison Population through the Year 2000* by Allan R. Barnes and Richard McCleary (1986);
- *Engineering Feasibility Study of Fire Island as a Location for a Future Correctional Facility: Final Report* edited by David C. Junge (1986);
- *Fire Island Public Opinion Survey: Summary of Findings* by Allan R. Barnes (1986).

Additional reports include:

- *Alaska Correctional Requirements: A Forecast of Prison Population through the Year 2000 — Executive Summary* by UAA School of Justice (1986);
- *Technical Memorandum: Site Assessment and Site Evaluation* by UAA School of Engineering (1986);
- *Fire Island Feasibility Study: Summary Report — Final Report* by UAA School of Justice and UAA School of Engineering (1986).

FIRE ISLAND FEASIBILITY STUDY:

SUMMARY REPORT

FINAL REPORT

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FINAL REPORT

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PURPOSE AND SCOPE

Under contract with the Alaska Department of Corrections (ADOC), the University of Alaska, Anchorage Schools of Justice and Engineering have undertaken an assessment of the feasibility of locating a correctional facility on a portion of Fire Island, a 4,240 acre tract of land located in upper Cook Inlet about three miles off Point Campbell. The project was divided into three major phases: (1) an assessment of future bed space needs; (2) an evaluation of the physical site and creation of cost estimates; and (3) a public opinion survey and open discussion. This document summarizes the findings discussed at length in the following reports:

Phase 1. "Alaska Correctional Requirements: A Forecast of Prison Population Through the Year 2000"

Phase 2. "Engineering Feasibility Study of Fire Island as a Location for a Future Correctional Facility"

Phase 3. "Fire Island Public Opinion Survey and Forum"

PHASE 1: AN ASSESSMENT OF FUTURE BED SPACE NEEDS

The number of prisoners in state-operated facilities quadrupled between 1970 and 1984. Between 1980 and late 1985, the number of Alaska inmates has almost tripled, rising from 770 to 2073. Accurate forecasts of the future size and makeup of the prison population are needed as a basis for long-range programs and capital planning. Previous attempts by others to forecast prison population growth, however, have substantially underestimated the actual increases.

The statistical models used for these forecasts were designed by Richard McCleary, who has developed similar models successfully predicting prison population growth in other states. The mathematical models developed for Alaska utilized historical trends exhibited by Alaska and its prison population over the last fifteen years. The analysis revealed that the prison population has a natural growth of 5%; state unemployment and armed robbery rates are associated with fluctuations in the prison population, and the early 1980s revisions to the criminal code had a substantial impact on the dynamics of the prison population. The original model assumed that these features would not change through the year 2000. However, the legislature changed the "good time" awarded to prisoners from one day for every four served to a one to three ratio in mid-1986. This represents a significant change in the amount of time inmates will serve and in effect becomes an integral part of a new status quo. We assume this new aspect of our model will also remain in effect until the year 2000.

The model was used to produce three categories of forecasts: short- and long-range forecasts and forecasts based on scenarios of alternative futures.

The short-range forecasts were performed using pre-1985 data to assess the accuracy of the projection model. It appears that these short-range forecasts were conservative, slightly underestimating the actual population. This may indicate that our long-range forecasts are also conservative and underestimate the total population.

Application of two extreme alternative scenarios illustrates the range of the possible future ADOC population and specifically demonstrates the consequences of changes in the Alaska sentencing code, the unemployment rate, and the armed robbery rate. A scenario which entails complete repeal of the criminal code revisions adopted since 1979 and substantial decreases in both the unemployment and armed robbery rates would result in an ADOC population of approximately 2100 sentenced inmates by the end of the century.

At the other extreme, a "worst case" scenario would result if the "good time" award returned to its 1985 ratio, if the criminal code revisions since 1979 were not significantly altered or their effects on the ADOC population were not mitigated in some substantial fashion, and if the unemployment and armed robbery rates increased by at least 10 percent. This scenario would produce 4736 sentenced prisoners in 1990 and 24,333 sentenced prisoners by the year 2000.

The forecast of the most probable yearly prison population of Alaska is presented in Table 1 and Figure 1. Without changes from the status quo, Alaska's most probable long-range prison population, both sentenced and unsentenced, will total 2929 inmates in 1990 and 6241 inmates by the year 2000. The larger portion of the ADOC population, those actually sentenced to a prison term, will increase almost four-fold from 1985 levels.

Table 1

Alaska Prison Population Forecasts: 1985 through 2000*

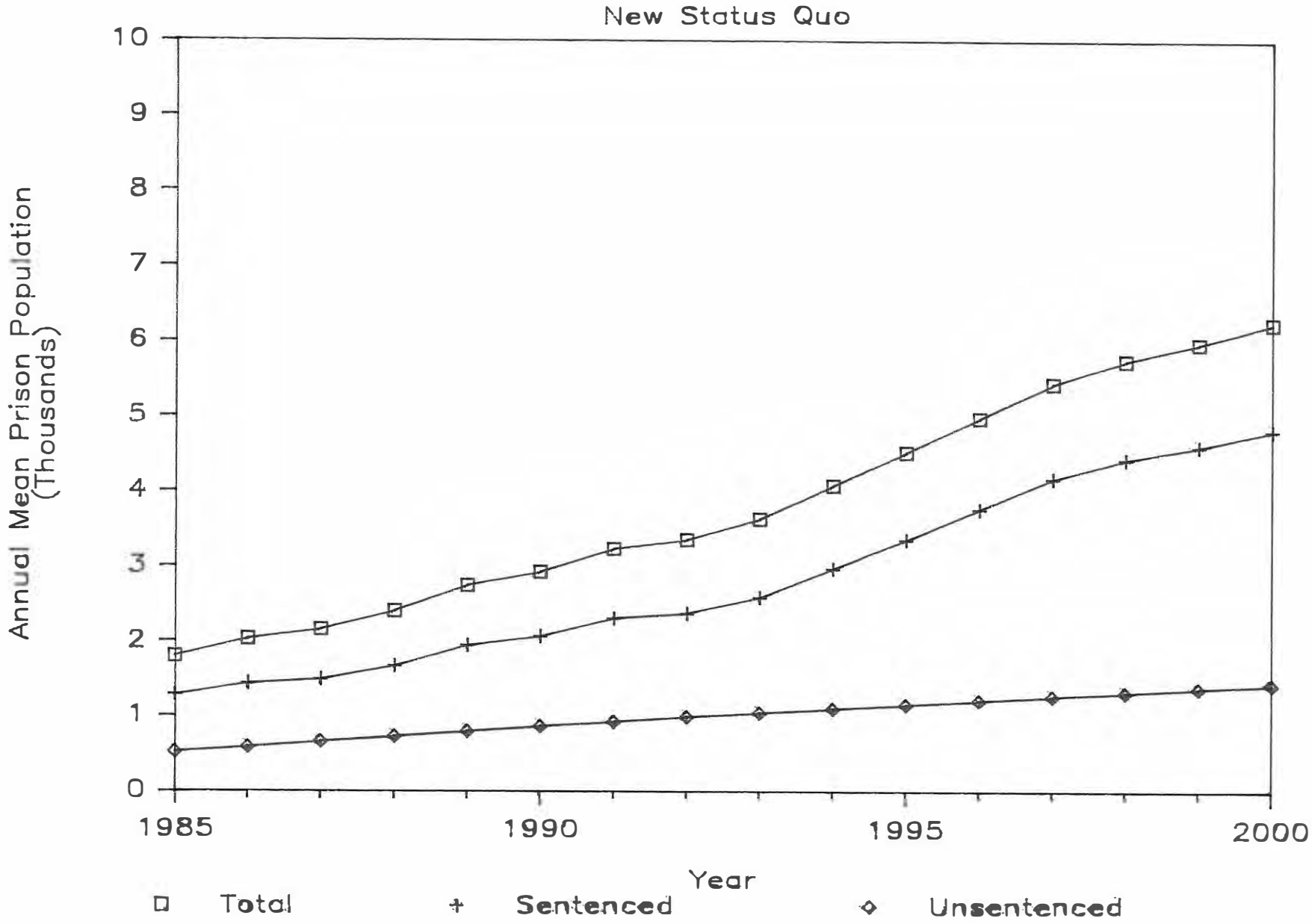
Year	Total	Unsentenced	Sentenced
1985	1806	521	1285
1990	2929	863	2066
1995	4523	1158	3365
2000	6241	1429	4812

* Based on new status quo assumptions, which include the 1986 "good time" change. Forecasts are mean yearly population estimates. Includes FBOP population.

The new status quo forecast provides the most likely future prison population prediction for Alaska. It is very likely that some additional changes in conditions which affect the prison population will occur over the next few years. Therefore, in planning for future bedspace needs ADOC may want to consider other futures from the range of possible scenarios. The tendencies towards further tightening of presumptive sentencing and increased use of incarceration which seem to exist in Alaska would cause one to expect any long-term changes affecting corrections to result in a higher rather than lower future Alaska prison population.

The forecast derived from this study provides evidence of the need for additional institutional capacity in southcentral Alaska by 1990. Planning should proceed to support the 2929 total inmates by 1990.

TOTAL POPULATION FORECASTS



PHASE 2: SITE ASSESSMENT AND COST ESTIMATES

The engineering feasibility study of Fire Island incorporated engineering and building considerations, cost projections and legal considerations.

The Fire Island site is large enough to accommodate a correctional institution with a maximum inmate population of 960; the climatic and geophysical characteristics of the site make it suitable for construction and operation of a prison, and soil conditions at the proposed site appear to be acceptable.

The need for utility services on the island raises important concerns. Available data indicate that the groundwater supply may exhibit salinity problems and might prove to be inadequate. The groundwater supply could be supplemented using treated surface water; however, the amount of surface waters available for continuous use and the degree of treatment which might be required are unknown at this time.

The technology is available to treat wastewaters generated on the proposed site and to deal with solid waste collected on the site. Electricity would probably have to be generated on site using diesel electric generators.

The location of the island within the Municipality of Anchorage, which is considered to be a "non-attainment" area for the air pollutants carbon monoxide and total suspended particulate, might have some minor impact on the process of obtaining permits to construct the facility.

The proximity of Fire Island to Anchorage International Airport results in some noise impact on the island. A study is currently underway in which the noise levels from the airport activity are being investigated. The results of the study will be available in 1987. The noise levels may require some small added cost in construction.

The proposed site on Fire Island has not been surveyed to determine if the area is archeologically significant. A preliminary survey of the proposed area would be required before any construction. If the site were found to be archeologically significant, additional studies which could delay construction might be required.

It would be necessary to conduct a wetland determination study of the proposed site prior to any construction activity. Studies of this type are done by the U. S. Army Corps of Engineers. If it were determined that the proposed construction activities would impact wetlands, then DOC would have to apply for special permits, and it is likely that some modifications would have to be made in the design and construction of the prison.

The least expensive access to Fire Island would be through the use of air cushion vehicles with supplementary use of barge service to handle some of the supply requirements. This alternative would require the construction of a dock at the island and one on the mainland. In addition, dredging of the channel north of the island would be necessary. Permits for these activities

would be required, resulting in significant time delays if it is determined that the proposed construction activities would have a significant environmental impact on the fisheries of Cook Inlet or its tributaries. The delays could total more then a year if an Environmental Impact Statement is required.

Construction cost estimates were made for a 960 inmate facility on Fire Island, using the Spring Creek Correctional Center as a model. The estimates were based on two scenarios:

(a)	With direct road access to the site:	$175,140,000
(b)	Without direct road access: (i.e., using air cushion vehicles)	$ 66,320,000

The construction cost estimates for the Fire Island site were compared with the estimates for sites at Palmer and at Goose Bay with the following results:

(a)	Construction at Palmer:	$ 50,210,000
(b)	Construction at Goose Bay:	$ 50,210,000

A study of the relative benefits and liabilities of the sites at Fire Island, Palmer, and Goose Bay revealed that Fire Island has more potential liabilities as a correctional site than the sites at Palmer and Goose Bay. No special engineering or cost benefits for Fire Island were found in the study.

Locating a prison on an island with limited access raises some points of legal concern. It could lead to legal challenges based on issues of cruel and unusual punishment.

The reader is cautioned that: (1) the economic studies con-

tained herein are based on cost projections rather than on firm contractor bids; and (2) the study does not include any information concerning the cost of land acquisition for proposed alternative sites.

PHASE 3: PUBLIC INVOLVEMENT

A public opinion telephone survey was conducted by the School of Justice, November 1 - 11, 1986. A random sample of one thousand people from the Municipality of Anchorage and the Matanuska-Susitna Borough were interviewed.

The individuals interviewed were obtained by assigning random numbers to the telephone prefixes for the Anchorage and Mat-Su area. Five hundred completed surveys were obtained for each area. The average age of respondents was 38 years; 87% were white, and 57% were female. The survey group can be described as those individuals at least 18 years old who reside in households with telephones.

The results seem to indicate that the respondents favored spending money to prevent and deter crime rather than to punish prisoners or to build additional prisons. When informed about the increased cost of construction and operation, they did not favor building a prison on Fire Island. The cost of constructing a new prison, however, was not deemed as important in deciding the appropriate location as either the impact of the prison on the local economy or the costs associated with everyday operations and programs of the new prison.

The results of Phases I, II, and III were presented at a

widely-advertised public forum in Anchorage concerning the Fire Island site on December 6, 1986. The purpose of the forum was to review the previously completed prison population forecast, the engineering feasibility study, and the public opinion survey and to obtain public reaction to these findings. Approximately twenty-five people attended the forum.

After presentation of the findings of the first two phases and the survey, the meeting was opened to the audience. The comments questioned the decision to study Fire Island only as a future prison site and not to expand the scope of study to include Fire Island's other potential uses. It was explained that the project was intended to be limited to the consideration of the site for correctional uses only. No one present expressed support for placing a correctional institution on Fire Island.

CONCLUSION

Our study of Fire Island as a potential prison site leads us to conclude that significant additional long-term prison bedspace will be needed by the 1990's, and it may be technically feasible at higher construction and operating cost levels to locate a facility on Fire Island. The public, however, in light of the increased costs, does not favor placing a prison on the island. Further, cost estimates will substantially increase if environmental issues or other possible problems identified in the engineering report such as an inadequate water supply occur or if a decision is made to reject the air cushion vehicle option for transportation and build direct road access solely for prison use. We conclude, therefore, that the Fire Island site is a

technically feasible but unacceptably expensive location for a prison at the present time.